Crossing the Cap: Overcoming Challenges in a CTO PCI Case

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A 75-year-old male

Presented with effort angina for 2 weeks

Medical history

Type II diabetes mellitus, Ischemic heart disease

Surgical history

CABG: LIMA to LAD in 2004

Coronary Angiography

LCx 100% occluded

The LAD 100%. Additionally, the Y radial graft is blocked from the anastomosis to the LIMA.

Plan: PCI to LCx CTO by HDR technique

Angiography is performed in multiple projections to establish the appropriateness of the vessel anatomy for HDR and to determine the length of the CTO.

After the proximal cap of the CTO was identified, a microcatheter was advanced over a workhorse wire until its tip was adjacent to the cap.

The proximal cap was punctured using a Gaia Next 2 wire (Asahi Intecc)

The wire was only be advanced 2 to 4mm into the body of the CTO to minimize the possibility of entering the extraplaque space.

The microcatheter was advanced over the wire until the tip was visibly positioned beyond the boundary of the proximal cap.

Angiography was performed to confirm the location of the mi crocatheter tip

Wire was removed

The microcatheter hub was filled with saline or contrast

A small (3mL) Luer lock syringe filled with pure contrast was attached to the microcatheter hub.

A small volume of contrast (?0.5mL) was injected slowly within the body of the CTO distal to the microcatheter tip

The angiogram showed intraplaque contrast deposit in the proximal segment of CTO

The contrast syringe was removed, and a polymer jacketed wire was inserted into the microcatheter. The wire was advanced easily along the length of CTO

Had to change to Gia 2 to cross the distal cap

IVUS ballon dilatation and 2 stents were deployed and optimised using

Final result showed TIMI 3 flow in distal LCx and OM1